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TITLE : THERMAL SPRAY COATING ELECTRODE EXCELLENT IN DURABILITY AND ITS PRODUCTION

ABSTRACT : PURPOSE: To form a dense film high in adhesion and also low in electric resistance by forming a magnetite film having a specified thickness on the surface of a Ti base material by a plasma spraying.

CONSTITUTION: The magnetite film having 100-80 μ m thickness is formed on the surface of the Ti base material. In order to improve performance, the surface of the Ti base material is subjected to a blast treatment, and the surface is subjected to a sputtering treatment by a plasma flame under an atmosphere of 50-300hPa to activate the surface. The magnetite film having 30-300 μ m thickness is formed by the plasma spraying using a magnetite powder having 5-50 μ m grain size under the same atmosphere. The second magnetite film having 50-500 μ m thickness is formed by the plasma spraying using the magnetite powder having 10-100 μ m grain size under an atmospheric atmosphere. An effective surface area is enlarged and a large current power supply is possible when the film is formed by using coarse particles.

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*Abstraktion eines Magnetitbeschichtungs-
auf Titan durch Plasmaspraying*